

L 1971-66 FWT(1)/EPA(w)-2/EWA(m)-2/ETC(m) IJP(c) WW/GS/AT

ACCESSION NR: AT5017390

UR/0000/64/000/000/0168/0172

AUTHOR: Trokhan, A. M. (Novosibirsk)

TITLE: Using fast-electron beams in gas-dynamic measurements

SOURCE: Konferentsiya po avtomaticheskomu kontrolyu, i metodam elektricheskikh izmereniy, 3d, Novosibirsk, 1961. Avtomaticheskii kontrol' i metody elektricheskikh izmereniy; trudy konferentsii, t. 2: Tsifrovyye izmeritel'nyye pribory. Elektricheskkiye izmereniya neelektricheskikh velichin. Ustroystva avtomaticheskogo kontrolya i upravleniya v promyshlennosti (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Digital measuring instruments. Electrical measurements of nonelectrical quantities. Devices for automatic control and regulation in industry). Novosibirsk, Redizdat Sib. otd. AN SSSR, 1964, 168-172

TOPIC TAGS: gas dynamics

ABSTRACT: Original systems for measuring local gas-flow velocities developed by the author (Author's Certificates cl. 420.5, no. 131109, 30 Dec 59, and

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ACCESSION NR: AT5017390

cl. 42015, no. 134495, 29 Feb 60) are described. One system suitable for measuring gas velocities by a "luminous tracing" method has these claimed advantages: Absolute measurement; no probes; high spatial resolution (a fraction of mm); fast measurement (microseconds). Another system, based on the Doppler shift of radiation waves excited in the gas by a fast-electron beam, is intended for measuring very high speeds, up to a few km per sec. The x-ray gas radiation is recommended for use in this method. To measure gas-density fields, a system with two scanning disks, a photomultiplier, and an output oscilloscope or camera is proposed; the system can operate on x-rays, and is suitable for recording shock waves at any gas temperature. Orig. art. has: 4 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 11Nov64

ENCL: 00

SUB CODE: ME, NP

NO REF SOV: 002

OTHER: 007

Card 2/2

ACC NR: AP6034920.

SOURCE CODE: UR/0115/66/000/002/0021/0023

AUTHORS: Zelikson, D. L.; Trokhan, A. M.

ORG: none

TITLE: Electron guns for gas-dynamics and plasma measurements

SOURCE: Izmeritel'naya tekhnika, no. 8, 1966, 21-23

TOPIC TAGS: electron gun, electron beam, gas dynamics, plasma, diagnostic instrument, plasma measurement

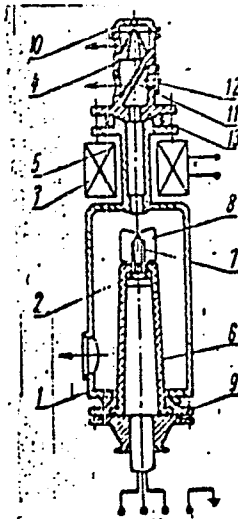
ABSTRACT: Electron guns for aerodynamic and plasma measurements are proposed. The first gun (see Fig. 1) consists of a housing, a cathode unit, an electromagnetic lens, and a gas-dynamics window. The housing is made of soft steel. The cathode is heated with ac or dc of 10--15 A. The voltage drop in the cathode is 1.5--2 V. The voltage on the focusing electrode is on the order of 10 V for an accelerating voltage of 2 kV and 400 V for an accelerating voltage of 50 kV. The pressure in the vacuum part is on the order of 10^{-3} N·m⁻². The electron energy of the beam is 2-50 keV. The beam current is 1 mA. The gun has a length of 410 mm, a maximum diameter of 140 mm, and a weight of 20 kg. The described guns have been used for measuring velocity and density fields and for visualization of currents.

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UDC: 533.6.083+533.9.07

ACC NR: AP6034920

Fig. 1. Electron gun: 1 - housing; 2 - cathode unit; 3 - electromagnetic lens; 4 - gas-dynamics window; 5 - copper tube; 6 - insulator; 7 - needle cathode; 8 - focusing electrode; 9 - joint; 10 - output cover; 11 - wall; 12 - window; 13 - spherical joint



Orig. art. has: 2 diagrams.

SUB CODE: 20 / SUBM DATE: none/ ORIG REF: 004/ OTH REF: 004

Card 2/2

ACC NR: AP7000649

SOURCE CODE: UR/0414/66/000/003/0129/0132

AUTHOR: Kuznetsov, I. L. (Novosibirsk); Baranova, G. R. (Novosibirsk); Ignatenko, Yu. V. (Novosibirsk); Trokhan, A. M. (Novosibirsk)

ORG: none

TITLE: Effect of combustion on turbulence level

SOURCE: Fizika goreniya i vzryva, no. 3, 1966, 129-132

TOPIC TAGS: turbulent combustion, combustion characteristic, combustion product, turbulent flow

ABSTRACT: A photoelectric method for measurement of turbulence in the inner zone of the flame and in the combustion products is described. A single-channel system was utilized with a probing beam of sufficiently small diameter (1.1 mm) to measure turbulence of small wavelengths. The experiments were conducted using sheet flame, inducing turbulence with grids of several cell sizes. It was established that gas flow without burning maintained a much lower turbulence level. Correcting for the dissipation effects, the highest turbulence level was found to be at the end of combustion and combustion products zones. Results of measured velocity fluctuations are given for a set of mixtures of propane-butane with air and hydrogen. The velocity fluctuation spectrum was found to be Gaussian, as in the case of noncombustible flow in the isothermal case.

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UDC: 536.46+532.507

ACC NR: AP7000649

It is clear from the level of turbulence observed in the experiments that turbulence must be taken into account to provide a complete description of the combustion process. Orig. art. has: 4 figures, 1 formula.

SUB CODE: 07,20 ~~24~~ SUBM DATE: 04Apr66/ ORIG REF: 003/ OTH REF: 001

Card 2/2

ACC NR: AP6034595

SOURCE CODE: UR/0115/66/000/010/0024/0028

AUTHOR: Derevyanko, N. F.; Trokhan, A. M.

ORG: none

TITLE: Applying the correlation method in measurements plasma stream velocity

SOURCE: Izmeritel'naya tekhnika, no. 10, 1966, 24-28

TOPIC TAGS: plasma stream, plasma velocity, plasma measurement

ABSTRACT: Since the usual method of measuring plasma stream velocity is inaccurate and laborious, the correlation method of processing data from a photoelectric monitor is recommended. This consists of recording the time interval between radiance pulses at two points in the core recurring at a measurable distance from each other. Calculating the cross-correlation function for these two points, its maximum will fall at the most probable time lag between them. If the pulsation is steady, this function will give the average velocity of the plasma and the function spectrum will indicate the pulsation rate in the given time interval. A series of formulas is given, starting with that for the cross-correlation function based on harmonic functions of diverse luminance in the two points of light. This is developed for variable rates of motion in the points, also for frequency and amplitude modulations of rays registered on the two oscillographs. The relation of variable pulsation frequencies to average velocity of the points of plasma radiance is discussed, as established by cross-

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UDC: 533.9.07:519.27

ACC NR: AP6034595

correlation spectra. Typical radiance fluctuations are illustrated for three modes of operation of a dc plasmatron with two points of light 36 mm apart in the plasma stream. Cross-correlation spectral curves show identical frequency deviation between the three modes at 135 cps, which corresponds to a velocity of the order of about 70 m/sec. Similar tests with a plasma in argon at 3000C gave a velocity of about 1430 m/sec relative to that of light. Orig. art. has: 15 formulas and 3 figures.

SUB CODE: 20/ SUBM DATE: 24Jun66/ ORIG REF: 009/ OTH REF: 003

Card 2/2

L 8998-66 EWT(d)/EWT(1)/EEG(k)-2/EPF(n)-2/T/EWA(m)-2/ETC(m) IJP(c) WW/AT

ACC NR: AP5027277

SOURCE CODE: UR/0207/65/000/005/0108/0111

AUTHOR: ^{44, 53} Trokhan, A. M. (Novosibirsk)

ORG: none

TITLE: On drawing electron beams from a vacuum into a gas through a gas-dynamic window

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1965, 108-111

TOPIC TAGS: ^{21,44,55} electron beam, rarefied gas, refrigerant gas, gas dynamics, ^{21,44,55} cryogenic pump, high vacuum pump

ABSTRACT: While it is possible to use small capillary tubes to extract low intensity electron beams from a vacuum system for injection into a gas at some higher pressure, for high-intensity beams the backflow of gas into the vacuum system constitutes a problem. In this connection it is customary to employ differential gas-dynamical "windows", where (for e) pumps are used to evacuate an intermediate chamber between vacuum and gas systems. In this paper a new design is discussed in which the pumps are replaced by a cryogenic apparatus reducing the flow of gas into the vacuum by condensation. The intermediate space is filled

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L 8998-66

ACC NR: A15027277

with cold CO_2 or water vapor serving as the refrigerant. This method has the advantages of being less bulky and of introducing no vibration into the gas confining system. Windows with a diameter of 15--20 mm have been constructed, in contrast with diameters of 3--4 mm permitted by the use of pumps. An example of such a design is shown schematically in Fig. 1.

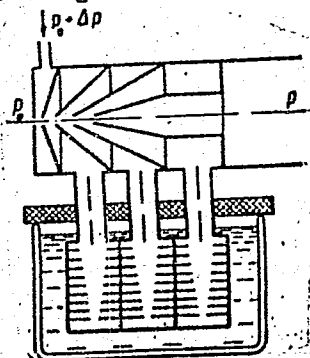


Fig. 1. Design of cryogenic gas window for extraction of electron beam. This form of construction limits deflection of crystals of the refrigerant gas (CO_2 or H_2O) into the vacuum system by the flow of gas into the refrigeration chamber. The gaseous medium is at a pressure p_0 , substantially higher than that in the "vacuum" system from which electrons are drawn.

Orig. art. has: 6 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 15Apr65/ ORIG REF: 002/ OTH REF: 004

Card 2/2

L 24725-60

ENCLOSURE/ENCLOSURES, STAFF, AFFILIATION, ADDRESS, 10/1/87, 44-38861-1000

ACC NR: AP6009545

SOURCE CODE: UR/0413/66/000/005/0078/0078

INVENTOR: Trokhan, A. M.

5

ORG: none

TITLE: Method for measuring the local temperature of gas and plasma
media. Class 42, No. 179496

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 78

TOPIC TAGS: spectral line, gas property, plasma temperature, plasma radiation, electron spectrum (2)

ABSTRACT: An Author Certificate has been issued for a method of measuring local temperatures of gas and plasma media according to the Doppler widening of spectral lines. To determine temperatures of non-luminous gases and optically nontransparent plasma media with high accuracy, beams of rapid electrons, exciting local characteristic radiation of gas or plasma in the visible or x-ray part of the spectrum, are introduced in the given region of the medium being studied.

NT

SUB CODE: 20/

SUEM DATE: 07 Aug 64/

Card 1/1 EV

UDC: 533.9.082.5

ACC NR: AP7002564 (A,N) SOURCE CODE: UR/0413/66/000/023/0052/0052

INVENTOR: Trokhan, A.M.

ORG: none

TITLE: High-voltage voltmeter. Class 21, No. 189079. [announced by
Institute of Theoretical and Applied Mechanics, Siberian Branch AN SSSR,
(Institut teoreticheskoy prikladnoy mekhaniki sibirskogo otdeleniya
AN SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no.
23, 1966, 52

TOPIC TAGS: voltmeter, electromeasuring device, *PERMANENT MAGNET*
MATERIAL

ABSTRACT:

An Author Certificate has been issued for a high-voltage voltmeter (see Fig. 1).
To increase measurement accuracy, a permanent magnet (1) is installed
whose magnetic force lines are perpendicular to the electron beam, measured
voltage is applied to the beam-accelerating space of the electron gun, and
the vacuum chamber has shielding (5) which is connected to the last electrode
of the beam-accelerating system. [WP]

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UDC: 621.317.725.082.72

ACC NR: APT002564

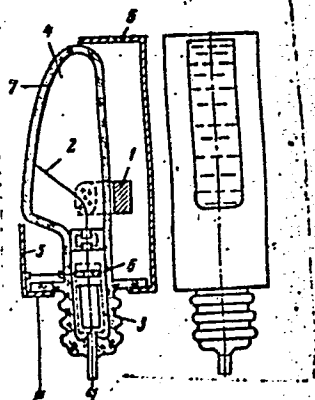


Fig. 1. High-voltage voltmeter

1 - Permanent magnet; 2 - electron beam; 3 - electron gun; 4 - vacuum tube with luminescent screen for electron beam recording; 5 - shield; 6 - fast accelerating electrode of electron gun.

SUB CODE: 14/ SUBM DATE: 05Mar65/ ATD PRESS: 5114

Cord 2/2

GURVICH, S.I.; TROKHACHEV, P.A.

Concerning B.I.Kogan's book "Economic outlines on rare earths."
Izv. AN SSSR.Ser.geol. 28 no.5:104-105 My '63. (MIRA 17:4)

1. Geologorazvedochnyy trest No.1 Ministerstva geologii i okhrany
nedr SSSR, Moskva.

TROKHAN, L. K.

REF ID: A65 EIT(4)/EED-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c) BB/GG
 UR/0208/65/005/002/0317/0325

ACCESSION NR: AP5009396

AUTHOR: Babetskiy, G. I. (Novosibirsk); Beshanova, M. M. (Novosibirsk);
 Voloshin, Yu. M. (Novosibirsk); Yershov, A. P. (Novosibirsk); Zagatskiy, B. A. (Novosibirsk);
 Zmiyevskaya, L. L. (Novosibirsk); Kozhukhin, G. P. (Novosibirsk);
 Kozhukhina, S. K. (Novosibirsk); Mikhkovich, R. D. (Novosibirsk); Mikhalevich,
 Yu. I. (Novosibirsk); Pottosin, I. V. (Novosibirsk); Trokhan, L. K. (Novosibirsk)

TITLE: AL'FA automatic programming system

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 5, no. 2,
 1965, 317-325

TOPIC TAGS: automatic computer programming, computer language, computer system,
 machine translation, computer/AL'FA computer programming, AL'FA computer
 language, AL'FA computer system

ABSTRACT: This article presents a detailed description of the AL'FA Automatic
 Programming System which translates from an ALGOL type language.
 The AL'FA System was developed by a group of twelve scientists at the
 Computing Center of the Siberian Branch of the Academy of Sciences USSR
 and is intended for the electronic computer of the same computing center

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ACCESSION NR: AP5009396

which has the following characteristics: three-address, floating-point, one index register, an immediate access memory of 4096 45-bit words, three magnetic drums with a total storage capacity of 12,288 words, four magnetic tape units with 75,000 words storage capacity each, punch card input and output, average speed 20,000 operations per second.

The AL' FA System consists of the following components: 1) AL' FA language, the input language in which the problems to be solved are programmed. This language is an extension of the ALGOL-60 language. 2) AL' FA translator, the translating program by means of which the program written in AL' FA language is translated into the computer program. It consists of 24 blocks with a total storage capacity of 45,000 words. The performance of particular blocks and translation procedure are described in detail, and 3) the AL' FA debugging program, which makes it possible to correct the AL' FA program without studying the computer program. The storage capacity of the AL' FA debugging program is approximately 2000 words.

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ACCESSION NR: AP5009396

It is indicated that scientists were working on the development of the AL' FA System from 1959 to 1964 and that the estimated labor used amounts to 35 man-years. The AL' FA System has been in an experimental stage of operation since January 1964. Some operational data obtained in the first five months are presented and compared with the data on manual programming. Orig. art. has 2 tables.

ASSOCIATION: none

SUBMITTED: 05Oct64

NO REF SOV: V008

ENCL: 00

OTHER: 002

SUB CODE: DP

ATD PRESS: 3244-F

Card 3/3

TROKHIMCHUK, S.V.

History of the economic development of landforms in the Stryysko-
Sanskaya Verkhovina. Geog.sbor. L'vov.o.td.Geog.ob-va SSSR no.8145-
48 '64. (MIRA 18:5)

ACCESSION NR: AP4024486

AUTHOR: Trokhimenko, Ya. K.; Isakov, V. I.

S/0142/64/007/001/0051/0057

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756720009-4"

TITLE: Traveling wave tube operation in the second pass band of an iris loaded waveguide

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 1, 1964, 51-57

TOPIC TAG: traveling wave tube, slow wave system, coupled cavity system, twt operation, spatial harmonic, first spatial harmonic, first pass band, second pass band, coupling resistance, twt accelerating voltage

ABSTRACT: On the basis of theoretical and experimental research it is shown that by using as a slow-wave system a suitably chosen cavity system, positive inductive coupling, it is possible to operate a traveling wave tube on the fundamental spatial harmonic in both the first and second pass bands. When operating on the fundamental spatial harmonic in the first pass band, the bandwidth and the coupling resistance of the system of this type are close to the corresponding parameters of slow wave systems with inductive negative coupling. When operating in the second pass band, this system can be used in the order of 100 kV. the second pass band negative coupling, but with a system designed to operate at the first spatial harmonic has a

Card 1/2

The is close is simple to operate higher coupling harmonic. Orig.

ASSOCIATION: None.

SUBMITTED: 25May63

SUB CODE: GE, SD

5Apr64

ENCL: 00

NR REF: 001

OTHER: 003

ACCESSION NR: AP4024486

S/0142/64/007/001/0051/0057

AUTHOR: Trokhimenko, Ya. K.; Isakow, V. L.

TITLE: Traveling wave tube operation in the second pass band of an iris loaded waveguide

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 1, 1964, 51-57

TOPIC TAGS: traveling wave tube, slow wave system, coupled cavity system, twt operation, spatial harmonic, first spatial harmonic, first pass band, second pass band, coupling resistance, twt accelerating voltage

ABSTRACT: On the basis of theoretical and experimental research it is shown that by using as a slow-wave system a suitably chosen cavity chain with positive inductive coupling, it is possible to operate a traveling wave tube on the fundamental spatial harmonic in both the first and second pass bands. When operating on the fundamental spatial harmonic in the first pass band, the bandwidth and the coupling resistance of the system of this type are close to the corresponding parameters of slow wave systems with inductive negative coupling. When operating in the second pass band, this system can be used in

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pulsed traveling wave tubes with accelerating voltage on the order of 100 kV. The coupling resistance of such a system operating in the second pass band is close to that of a slow-wave system with inductive negative coupling, but is simpler in construction and has a greater bandwidth. A system designed to operate in the second pass band at the fundamental spatial harmonic has a higher coupling resistance than that designed to operate at the first spatial harmonic. Orig. art. has: 10 figures.

ASSOCIATION: None.

SUBMITTED: 25May63

DATE ACQ: 15Apr64

ENCL: 00

SUB CODE: GE, SD

NR REF SOV: 001

OTHER: 003

Card 2/2

SOKOLOVSKIY, V.V.; RADKEVICH, I.A.; GOL'DIN, L.L.; KLEPOV, I.F.;
KULAKOV, F.M.; LUZIN, V.N.; MOZALEVSKIY, I.A.; OKOROKOV, I.S.;
TALYZIN, A.N.; ~~TROKHACHEV, G.V.~~

Effect of variations in the power supply system of a proton
synchrotron on the magnetic characteristics of its units.
Prib. i tekhn. eksp. 7 no.4:240-244 J1-Ag '62.
(MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-
darstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR
i Nauchno-issledovatel'skiy institut elektrofizicheskoy
apparatury Gosudarstvennogo komiteta po ispol'zovaniyu
atomnoy energii SSSR.

(Electromagnets) (Synchrotron)

TALYZIN, A.M.; GOL'DIN, L.L.; TROKHACHEV, G.V.; RADKEVICH, I.A.;
MOZALEVSKIY, I.A.; SOKOLOVSKIY, V.V.; KUKABADZE, G.M.;
BELOZEROVA, L.A.; BORISOV, V.S.; BYSHEVA, G.K.; VESOLOV, M.D.;
GORIACHEV, Yu.M.

Study and corrective measurements of the magnetic characteristics of S-elements of a proton synchrotron with low fields.
Prib. i tekhn. eksp. 7 no.4:184-192 J1-Ag '62.
(MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR i Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.
(Magnetic measurements) (Synchrotron)

ALEKSEYEV, A.G.; GORELKIN, A.S.; MOZALEVSKIY, I.A.; MOZIN, I.V.;
TARASOV, B.I.; TROKHACHEV, G.V.

Use of permalloy transducers for mass magnetic measurements in
a proton synchrotron. Prib. i tekhn. eksp. 7 no. 4:179-184
Jl-Ag '62. (MIRA 16:4)

1. Nauchno-issledovatel'skiy institut elektrofizicheskoy
apparatury Gosudarstvennogo komiteta po ispol'zovaniyu
atomnoy energii SSSR.
(Magnetic measurements) (Synchrotron)

TROKHACHEV, M. Ye.

In defense of the new project of the All-Union State Standard for
stump wood. Gidroliz. i lesokhim. prom. 14 no.7:22 '61.
(MIRA 14:11)

1. Verkhoturaskiy lesokhimicheskiy zavod.
(Turpentine)

GINZBURG, A.I.; GONZHEVSKAYA, S.A.; YEROFEYEVA, Ye.A.; SIDORENKO, G.A.;
MALYSHEV, I.I., red.; POLYAKOV, M.V., red.; RODIONOV, G.G., red.;
STEPANOV, I.S., red.; TROKHACHEV, P.A., red.; FAGUTOV, V.P., red.;
KHRUSHCHOV, N.A., red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V.,
red.; SHCHERBINA, V.V., red.; EYGELES, M.A., red.; NEMANOVA, G.F.,
red.izd-va; BYKOVA, V.V., tekhn.red.

[Titanates, tantalates, and niobates] Titano-tantalo-niobaty.
Moskva. Gos. nauchno-tekhn.izd-vo lit-ry po geol.i okhrane nedr.
Part 1. 1960. 166 p. (Geologiya mestorozhdenii redkikh elementov,
no.10). (MIRA 14:6)

(Titanates)

(Tantalates)

(Niobates)

ZABOLOTNAYA, N.P.; NOVIKOVA, M.I.; SHATSKAYA, V.T.; GINZBURG, A.I.,
glavnyy red.; POLYAKOV, M.V., zam. glavnogo red.; APEL'TSIN,
F.R., red.; GRIGOR'YEV, V.M., red.; RODIONOV, G.G., red.;
TROKHACHEV, P.A., red.; FAGUTOV, V.P., red.; KHRUSHCHOV, N.A.,
red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V., red.;
SHCHERBINA, V.V., red.; EYGELES, M.A., red.; KOLOSHINA, T.V.,
red. izd-va; BYKOVA, V.V., tekhn. red.

[Tungsten-molybdenum-tin-beryllium deposits and their formation].
Vol'fram-molibden-olovo-berillievye mestorozhdeniia i uslovia
ikh obrazovaniia. Moskva, Gosgeoltekhizdat, 1962. 94 p. (Geo-
logiia mestorozhdenii redkikh elementov, no.18).
(MIRA 16:4)

(Metals, Rare and minor)

GORZHEVSKAYA, Susanna Aleksandrovna; SIDORENKO, Galina Aleksandrovna;
GINZBURG, A.I., glavnyy red.; POLYAKOV, M.V., zamestitel' glavnogo
red.; APEL'TSIN, F.R., red.; GRIGOR'YEV, V.M., red.; RODIONOV, G.G.,
red.; STEPANOV, I.S., red.; TROKHACHEV, P.A., red.; FAGUTOV, V.P.,
red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V., red.; SHCHERBINA,
V.V., red.; EYGELES, M.A., red.

[Titano-tantalo-niobates. Part 2.] Titano-tantalo-niobaty.
Moskva, Nedra. Pt.2. 1964. 115p. (Geologiya mestorozhdenii
redkikh elementov, no.23) (MIRA 18:1)

SHEYNMANN, Yu.M.; APEL'TSIN, F.R.; NECHAYEVA, Ye.A.; GINZBURG, A.I., red.;
MALYSHEV, I.I., red.; POLYAKOV, M.V., red.; RODIONOV, G.G., red.;
STEPANOV, I.S., red.; TROKHACHEV, P.A., red.; FAGUTOV, V.P., red.;
KHRUSHCHOV, N.A., red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V.,
red.; SHCHERBINA, V.V., red.; EYGELES, M.A., red.; ROZHKOVA, L.G.,
red.izd-va; BYKOVA, V.V., tekhn.red.

[Alkaline intrusions, their distribution, and the mineralization
associated with them] Shchelochnye intruzii, ikh razmeshchenie i
sviazannaia s nimi mineralizatsiia. Moskva, Gos.nauchno-tekhn.
izd-vo lit-ry po geol.i okhrane nedr, 1961. 176 p. (Geologia
mestorozhdenii redkikh elementov, no.12/13). (MIRA 15:8)
(Rocks, Igneous) (Ore deposits)

SHVEY, Igor' Vladimirovich; GINZBURG, A.I., glavnyy red.; POLYAKOV, M.V.,
zamestitel' glavnogo red.; APEL'TSIN, F.R., red.; GRIGOR'YEV, V.M.,
red.; RODIONOV, G.G., red.; STEPANOV, I.S., red.; TROKHACHEV, P.A.,
red.; FAGUTOV, V.P., red.; KHRUSHCHOV, N.A., red.; CHERNOSVITOV,
Yu.L., red.; SHMANENKOV, I.V., red.; SHCHERBINA, V.V., red.;
EYGELES, M.A., red.; ENTIN, M.L., red.izd-va; BYKOVA, V.V., tekhn.red.

[Basic geochemical problems of rare earth elements and yttrium in
endogenic processes] Osnovnye voprosy geokhimii redkozemel'nykh
elementov i ittrii v endogennykh protsessakh. Moskva, Gos. nauchn.-
tekhn. izd-vo lit-ry, po geologii i okhrane neдр, 1962. 105 p.
(Geologiya mestorozhdenii redkikh elementov, no.15). (MIRA 15:11)
(Rare earth metals) (Yttrium)

TERENT'YEVA, K.F.; GINZBURG, A.I., glavnyy red.; MALYSHEV, I.I., red.;
RODIONOV, G.G., red.; STEPANOV, I.S., red.; TROKHACHEV, I.A., red.;
FACUTOV, V.P., red.; KHRUSHCHEV, N.A., red.; CHERNOSVITOV, Yu.L.,
red.; SHMANENKOV, I.V., red.; SHCHERBINA, V.V., red.; EYGELES, M.A.,
red.; ROZHKOVA, L.G., red. izd-va; GUROVA, O.A., tekhn. red.

[Rare elements in bauxites] Redkie elementy v boksitakh. Moskva,
Gos. nauchn.-tekhn. izd-vo lit-ry po geol. i okhr. nedr, 1959. 47 p.
(Geologia mestorozhdenii redkikh elementov, no. 6). (MIRA 13:12)
(Metals, Rare and minor) (Bauxite)

STAVROV, O.D.; GINZBURG, A.I., glavnyy red.; POLYAKOV, M.V., zam. glav-
nogo red.; APEL'TSIN, F.R., red.; GRIGOR'YEV, V.M., red.; RODIO-
NOV, G.G., red.; STEPANOV, I.S., red.; TROKHACHEV, P.A., red.;
FAGUTOV, V.P., red.; KHRUSHCHOV, N.A., red.; CHERNOSVITOV, Yu.L.,
red.; SHMANENKOV, I.V., red.; SHCHERBINA, V.V., red.; EYGELES,
M.A., red.; FEDOTOVA, A.I., red. izd-va; IYERUSALIMSKAYA, Ye., tekhn.
red.

[Basic characteristics of lithium, rubidium, cesium in the process
of the formation granite intrusives and the pegmatites connected
with them.] Osnovnye cherty geokhimii litia, rubidii, tseziia v
protssesse stanovleniia granitnykh intruzivov i sviazannykh s nimi
pegmatitov. Moskva, Gosgeoltekhizdat, 1963. 140 p. (Geologia mes-
torozhdenii redkikh elementov, no.21). (MIRA 17:2)

SHCHERBINA, V.V.; GINZBURG, A.I., red. vypuska; MALYSHEV, I.I., red.;
 POLYAKOV, P.A., red.; RODIONOV, G.G., red.; STEPANOV, I.S., red.;
TROKHACHEV, P.A., red.; PAGUTOV, V.P., red.; KHRUSHCHOV, N.A.,
 red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V., red.
 EYGELES, M.A., red.; ROZHKOVA, L.G., red. izd-va; IYERUSALIMSKAYA,
 Ye.S., tekhn. red.

[Geology of rare metal deposits] Geologiya mestorozhdenii
 redkikh elementov. No. 8 [Geochemical characteristics of scandium
 and types of its deposits.] Osobennosti geokhimii skandia i
 tipy ego mestorozhdenii. Moskva, Gos.nauch.-tekhn.izd-vo lit-ry
 po geol. i okhr. nedr, 1960, 56p. (Geologiya mestorozhdenii
 redkikh elementov, no. 8). (MIRA 13:11)
 (Scandium)

~~TRONHACHEV, S.~~

Our suggestions on planning local budgets. Fin. SSSR 19 no.5:74-78
(MIRA 11:6)
My '58.

1. Zamestitel' nachal'nika Byudzhetnogo upravleniya Ministerstva
finansov Azerbaydzhanskoy SSR.
(Azerbaijan--Budget)

S/207/62/000/002/012/015
D237/D302

AUTHOR: Trokhan, A. M. (Novosibirsk)
TITLE: Kinematic measurement of the velocity of gaseous streams
PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1962, 112-121

TEXT: A review of methods available for velocity measurements of gaseous flows. The methods are grouped under two headings, namely: 1) Micro-particle tracing when the particles are either of the gas itself or of another gas introduced into the stream purposely; 2) macro-particle tracing when the particles are of a different order of magnitude than the gas molecules. There are 10 figures and 50 references: 21 Soviet-bloc and 29 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: J. H. Gerrard, *Acustica*, 1959, 9, 1, 17-23; G. J. Hecht, A. J. Lederman, R. A. Stern, A. K. Oppenheim. *Rev. Scient. Instrum.*, 1960, 31, 10, 1107-1111; R. E. Petersen, H. W. Emmons, *The Physics*

Card 1/2


Kinematic measurement of ...

S/207/62/000/002/012/015
D237/D302

of Fluids, 1961, 4, 4, 456-464; T. Maxworthy, The Physics of Fluids,
4, 5, 558-564.

SUBMITTED: December 1, 1961

Card 2/2



TROKHAN, A.M. (Novosibirsk)

Study of magnetic and electric fields in a gaseous medium with
the aid of electron beams. PMTF no.4:90-94 JI-Ag '62.

(MIRA 16:1)

(Magnetic fields) (Electric fields) (Electron beams)

L 10273-63

Po-4/Pab-4--AT/IJP(C)

ACCESSION NR: AP3002828

EWI(1)/EWG(k)/BDS/ES(w)-2--AFFTC/ASD/ESD-3/AFWL/SSD--Pz-4/Pi-4/

S/0207/63/000/003/0165/0168

76

AUTHOR: Trokhan, A. M. (Novosibirsk)

TITLE: Some methods of investigating the dynamic structure of plasma flow²⁾

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 3, 1963,
165-168

TOPIC TAGS: plasma-flow-structure measurement, plasma-turbulence measurement,
gas-flow-structure measurement, gas-turbulence measurement

ABSTRACT: A simple device called a "multislit periscope" has been designed for use in combination with a photorecorder to measure the velocity field of plasma. The general arrangement of the device is shown in Fig. 1 (see Enclosure). A nontransparent diaphragm 2 with a number of parallel slits is placed near the stream parallel to its direction of movement. Light beams passing the slits and a system of periscopes emerge from another parallel diaphragm 3 in positions

Card 1/3

L 10273-63

ACCESSION NR: AP3002828

shifted in the direction of plasma movement, yielding a multitrack photorecord of the flow. The velocity field of plasma in a given cross section and its evolution during the scanning period can be determined from the record. Time-of-flight can be recorded in conjunction with an a-c plasmatron and two photomultipliers placed at a distance from each other along the stream. A coincidence circuit is used to obtain statistical characteristics of the flow. This method is useful in the study of turbulence in plasma as well as in cold gas and helps to establish the flow structure. Orig. art. has: 6 formulas and 6 figures.

ASSOCIATION: none

SUBMITTED: 27Nov62 DATE ACQ: 16Jul63

ENCL: 01

SUB CODE: 00

NO REF SOV: 001

OTHER: 000

Card 2/3

TROKHAN, A.M. (Novosibirsk)

Photographic examination of pulsations in plasmatrone with
air stabilization. PMTF no.2:160-163 Mr-Ap '64. (MIRA 17:8)

S/0207/64/000/003/0081/0094

ACCESSION NR: AP4041196

AUTHOR: Trokhan, A. M. (Novosibirsk)

TITLE: Measuring the parameters of gas flow by means of a beam of fast electrons

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 3, 1964, 81-94

TOPIC TAGS: gas flow, electron beam, fluorescence tracing, Pitot tube, gas velocity, gas density, gas pressure, optical measurement, gas fluorescence

ABSTRACT: A survey of methods of measuring the characteristics of gas flow, with evaluations of different techniques, is presented. The chief interest is in the possible use of a fine beam of fast electrons as a sonde for determining local velocity and density and also for permitting visual observation of the gas stream. Fluorescent and x-ray measurements were used, obtained by passing a beam of electrons through the desired region of the gas stream. The author points out the insensitivity of measurements in the Pitot tube. At Reynolds numbers less than 200, the pressure given by the Pitot tube differs from the ideal value computed from Rayleigh's formula, and when the Reynolds numbers are less than a few tens, the geometry of the sonde begins to have a marked effect. Furthermore, measurements in the Pitot tube complicate interpretation because of the effects of

Card 1/2

ACCESSION NR: AP4041196

compressibility, shearing, and retardation of molecular excitation in the gas. Better results are achieved by tracing streams of ions, formed by pulsed irradiation of moving gas by a beam of fast electrons. Two valuable advantages result: the methods are absolute (do not need calibration), and they require no insertion of a foreign sonde into the gas stream. However, the tracing of ions permits determination of only some average velocity value for the irradiated section, and the measuring base must be large because of the low directional capability of electrodynamic detectors. The most desirable objective, the possible determination of local velocity (at any desired point), requires a minimal measuring base. The author concludes that using optical measurements will offer the best solution. "The author thanks S. A. Khristianovich for his interest in the work." Orig. art. has: 17 figures and 10 formulas.

ASSOCIATION: none

SUBMITTED: 17Dec63

ATD PRESS: 3084

ENCL: 00

SUB CODE: ME, NP

ID REF SOV: 005

OTHER: 019

Card 2/2

There, the transmitter is given full-time access to the channel. Thus, the transmitter is given full-time access to the channel.

"APPROVED FOR RELEASE: 03/14/2001

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"APPROVED FOR RELEASE: 03/14/2001

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APPROVED FOR RELEASE: 03/14/2001

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L 40266-66

ENT(1)/ENT(10)/ENT(15)

10/11

ACC NR: AP6020559

SOURCE CODE: UR/0414/66/000/001/0112/0116

AUTHOR: Trokhan, A. M. (Novosibirsk); Kuznetsov, I. L. (Novosibirsk); Baranova, G. R. (Novosibirsk); Ignatenko, Yu. V. (Novosibirsk)

ORG: none

TITLE: Photoelectric method of measuring the turbulence of high-temperature flows

SOURCE: Fizika gorenija i vzryva, no. 1, 1966, 112-116

TOPIC TAGS: photoelectric method, high temperature research, flow temperature measurement, turbulent flow

ABSTRACT: A recording method is described which permits determining the amplitude spectrum of the velocity fluctuations of a turbulent flow and to find the mean flow velocity. The investigated section of the flow with tracking particles is projected by means of an optical system onto a flat screen with two parallel slits. In the case of a low-temperature flow this section is illuminated by an intense external source, whereas at a sufficiently high temperature the self-luminescence of the particles can be used. When the image of the luminous particle strikes the slit, a voltage pulse arises at the output of a photomultiplier which is then amplified and discriminated. The output pulse of the channel connected with the first slit of the screen along

UDC: 536.47+532+507

Card 1/2

.L 49245-66

ACC NR: AP6020559

the flow is used to trigger the sweep of the oscillograph; the pulse of the second channel is sent to the input of the amplifier. When the image of the luminous particle strikes the second slit a bright flash appears on the screen of the oscillograph. Since the velocity of various particles in a turbulent flow is dissimilar, the bright flashes arise at various distances from the place of triggering, grouping about a point corresponding to the most powerful transit time of the particles between the slits. Photographing of the screen of the oscillograph with a long exposure (about 5 min) and subsequent photometering of the negative yields the probability density of the flashes on the screen. Hence it is easy to derive the amplitude spectrum of longitudinal velocity fluctuations of the flow. This method can be used to obtain local values of turbulence not only in cold flows and transparent flames, but also in optically opaque media. In this case a beam of fast electrons is used to irradiate the tracking particles and the x-radiation emitted by the particles upon entering the irradiated region is recorded. Recording of the transit time between two fixed points is accomplished as in the optical variant described. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 23Nov65/ ORIG REF: 002/ OTH REF: 000

Card 2/2 *MLP*

ТРОХИМЧУК, Ю. Ю.

Mathematical Reviews
Vol. 15 No. 4
Apr. 1954
Analysis

8-24-54
LL

3
Trochimčuk, Yu. Yu. On removable boundary sets.
Ukrain. Mat. Žurnal 4, 312-322 (1952). (Russian)

The paper, which restricts itself to plane sets, consists of comments on two criteria for removability due to L. Sario [Ann. Acad. Sci. Fennicae. Ser. A. I. Math.-Phys. 50 (1948); these Rev. 10, 365]. Of the two criteria concerned, one includes the other as a special case and the author shows this to be a proper inclusion. He shows further, inter alia, that a set satisfying the first criterion meets rectifiable curves in sets of zero length and that a set satisfying the second criterion has projections of zero length on the axes.

L. C. Young (Madison, Wis.).

TROKHIMCHUK, Yu. Yu.

Sequences of analytic functions and Riemann surfaces. Ukr. mat. zhur. 4 no. 4:
431-446 '52. (MIRA 6:10)

(Functions, Analytic) (Riemann, Surfaces)

TROKHIMCHUK, Yu. Yu.

Eliminable boundary sets. Ukr.mat.zhur. 4 no.3:312-322 '52. (MLBA 6:10)
(Aggregates) (Surfaces, Representation of)

1. TROKHIMCHUK, Yu. Yu.
2. USSR (600)
4. Riemann Surfaces
7. Theory of sequences of Riemann surfaces. Ukr. mat. zhur. 4, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

TROKHIMCHUK, Yu. Yu.

Mathematical Reviews
May 1954
Analysis

Trokhimchuk, Yu. Yu. ³ On the theory of sequences of Riemann surfaces. Ukrain. Mat. Zhurnal 4, 49-56 (1952). (Russian)

Trokhimchuk, Yu. Yu. On sequences of analytic functions and Riemann surfaces. Ukrain. Mat. Zhurnal 4, 431-446 (1952). (Russian)

These papers are related to recent work of Volkovyskil [Mat. Sbornik N.S. 23 (65), 361-382 (1948); these Rev. 10, 365] on the notion of kernel of a sequence of Riemann surfaces. In the first paper the author considers only sequences F_n of Riemann surfaces (over a complex w -plane) from which all branch points have been removed and which have a common disc Q . The definition of a kernel is then the same as that given by Carathéodory [Math. Ann. 72, 107-144 (1912)]. It is pointed out that, although a kernel always exists, it need not be unique; hence a construction given by Carathéodory does not determine a unique kernel. A path p in the w -plane, starting in the projection of Q , is called admissible if almost all F_n (i.e., all but a finite number) can be continued along p , starting in Q . If the continuation is independent of n (for almost all n), p is called normal. It is proved that F_n has a unique kernel F if and only if every normal curve p lies in F ; an equivalent condition is given in terms of "normal chains". It is shown that uniform convergence at a point, for a sequence of functions $w=f_n(z)$ mapping subsurfaces of a Riemann surface G onto F_n , implies existence of a unique kernel.

*Truhinink
4/2*

In the second paper other characterizations of the kernel are given for the case in which the P_n are all domains on one Riemann surface R : for example, the kernel is the maximal domain containing Q such that every boundary point is a limit point of a sequence q_n of boundary points of the P_n . For the general case a simple kernel is defined and it is shown that, if the P_n are the Riemann surfaces of the inverses of functions $w=f_n(z)$ meromorphic in a domain G in the z -plane, then the simple kernel is the image of the maximal domain G_0 of uniform convergence of the sequence under the limit mapping $w=f(z)$ (provided f is not a constant). A domain G_A of generalized convergence of type (A) is defined by adding to G_0 certain of its boundary points relative to G . A kernel of type (A) is defined and it is shown that, just as in the preceding case, the limit function f maps G_A on the kernel of type (A).

W. Kaplan.

10-4-54 LL

TROKHIMCHUK Ya. Yu.

TRANSLATION FROM: *Referativnyy Zhurnal, Matematika*, 1957, Nr 1, 44-1-336
p. 53 (USSR)

AUTHOR: Trokhimchuk, Yu. Yu.

TITLE: On Some Sets of Singular Points of Continuous Analytic Functions (O nekotorykh mnozhestvakh osobykh tochek nepreryvnykh analiticheskikh funktsiy)

PERIODICAL: Zap. Ukr. poligr. in-ta, 1955, 11, pp. 133-135

ABSTRACT: A theorem is proved, which is in a sense a generalization of the theorem of the author (Ukr.mat. zh., 1952, 4, Nr 3 p. 318). Assume that a bounded set K with the characteristic (T_2) (Saks, S., *Teoriya integrala*, Moscow, Izd-vo in.lit., 1949) in two nonparallel directions belongs to the plane region D . Let $F(z)$ be a monogenic function beyond K and continuous on K . Then function $f(z)$ is analytic on D only when $\iint_D |f'(z)| dx dy < \infty$.
Reviewer's note: On page 133, line 2 from the bottom, "in two parallel" is printed instead of "in two nonparallel". The definition of the characteristic (T_2) is not accurate. Instead of "infinite number of times" it should read "uncountable number of times".
P.L. Ul'yanov

Card 1/1

TROKHIMCHUK, Yu. Yu.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress* (Cont.) Moscow
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN BSSR, MOSCOW, 1956, 237 pp.
There are 4 references, 2 of which are English, 1 is USSR, and
1 French.

Temlyakov, A. A. (Moscow). Integral Representation of Functions
of Two Complex Variables. 105

Timan, A. F. (Dnepropetrovsk). On a Linear Approximation
Processes of Periodic Function by Trigonometric Polynomials 105-106

Timan, A. F. (Dnepropetrovsk). On Some Problems of the
Constructive Theory of Functions Defined in the Finite
Interval of Real Axis Section. 106

Mention is made of Nikol'skiy, S. M. and Chebyshev, P. L. 106

Trokhimchuk, Yu. Yu. (Novosibirsk). On N. N. Luzin
Problems in the Theory of Functions of a Complex Variable. 106

Tumarkin, G. Ts. (Moscow). On Certain Boundary Properties
of Analytic Function Sequences. 106-107

Card 33/80--

*

TROKHIMCHUK, Yu. Yu.

Two problems of N.N. Luzin. Usp. mat. nauk 11 no.5:215-222 S-0 '56.
(Functions of complex variables) (MLRA 10:2)

TROKHIMCHUK, Yu.Yu. (L'vov)

Theory of the differentiation of complex variable functions. Ukr.
mat.zhur. 8 no.2:177-190 '56. (MLBA 9:8)
(Functions of complex variables) (Differential equations)

TROKHIMCHUK, Yu. Yu.

SUBJECT USSR/MATHEMATICS/Theory of functions
 AUTHOR TROKHIMCHUK Ju. Ju.
 TITLE On two problems of N.H. Lusin.
 PERIODICAL Uspechi mat. Nauk 11, 5, 215-222 (1956)
 reviewed 1/1957

CARD 1/2 PG - 497

Let $f(z)$ be unique and continuous in the region D of the complex plane. Let M_ε be the set of the values of $\frac{f(z+\Delta z)-f(z)}{\Delta z}$ for all possible $0 < |\Delta z| \leq \varepsilon$

and for a given $\varepsilon > 0$. Let \mathcal{M}_z be the intersection of the closures of all M_ε (for variable ε). Lusin has given the following questions: 1) How is the set \mathcal{M}_z if on $f(z)$ it is nothing assumed but that it is unique and continuous in D ? 2) Which functions $f(z)$ being unique and continuous in a certain region have there an \mathcal{M}_z being independent of z ?

The following theorems of the author give a partial answer to these questions:

1. If $f(z) = u + iv$ possesses a complete differential in the point $z = x + iy$, then \mathcal{M}_z is either a circle or a point.
2. If $f(z)$ is an arbitrary function being unique and continuous in D , then \mathcal{M}_z is either a circle (in the special point) or the whole plane for almost all $z \in D$.

Uspechi mat.Nauk 11, 5, 215-222 (1956)

CARD 2/2

PG - 497

3. If \mathcal{M}_z does not depend on z , then \mathcal{M}_z is either the whole plane or a circle, where in the latter case $f(z)$ has the form

$$f(z) = Az + B\bar{z} + C.$$

The A, B and C are constants.

TROKHIMCHUK, Yu.Yu.

Pompeiu's hypothesis. Usp.mat.nauk 12 no.4:363-367 J1-Ag '57.

(MIRA 10:10)

(Functions of complex variables)

TROKHIMCHUK, Yu.Yu. (Novosibirsk)

Generalization of Picard's theorem [with summary in English]. Ukr.
mat.zhur. 10 no.1:70-77 '58. (MIRA 11:4)
(Functions, Analytic)

TROKHIMCHUK, Yu. Yu., Doc Phys-Math Sci -- (diss) "Continuous mapping and analytic functions." Novosibirsk, 1960. 12 pp, (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin and Order of Labor, Red Banner State Univ im Lomonosov), 180 copies, price not given, bibliography on pp 11-12, (KL, 17-60, 137)

AUTHOR: TROKHIMCHUK, Yu. Yu. (Novosibirsk) 41-1-6/15

TITLE: On the Generalization of Picard's Theorem (K obobshcheniyu teoremy Pikara)

PERIODICAL: Ukrainskiy Matematicheskiy Zhurnal, 1958, Vol. 10, No. 1, pp. 70-77 (USSR)

ABSTRACT: Definition: Let a plane domain G be called a Liouville domain, if in it each unique analytic and bounded function degenerates into a constant. The boundary of a Liouville domain with respect to the extended plane is called an L -set.
 Theorem: Every point set is an L -set.
 Theorem: Let D be a domain and $\Gamma \subset D$ an L -set. In order that a function $f(z)$ analytic in $D \setminus \Gamma$ is also analytic on Γ , it is necessary and sufficient that it is bounded in the neighborhood of each point of Γ .
 Definition: Let a closed set $\Gamma \subset D$ be called polar for a function $f(z)$ analytic in $D \setminus \Gamma$, if it contains only poles or regular points of $f(z)$. In the contrary case let the set be called non-polar.
 Theorem: In order that the L -set $\Gamma \subset D$ be polar for $f(z)$, it is necessary and sufficient that in each point $z \in \Gamma$ the finite or infinite boundary value

Card 1/2

On the Generalization of Picard's Theorem

41-1-6/15

$$f^*(\infty) = \lim_{z \rightarrow \infty} f(z), \quad z \in D \setminus \Gamma$$

exists.

Fundamental lemma: Let D be a plane domain. If the L -set $\Gamma \subset D$ is not polar for $w = f(z)$, then the value set of this function on $D \setminus \Gamma$ is a Liouville domain (in the w -plane).

Theorem of Picard: In each neighborhood D of a non-polar set Γ the analytic function $w = f(z)$ infinitely often attains nearly each finite value. The attained values form a set of the second category in the w -plane.

Definition: The point w_0 of the w -plane is called p -fold for $f(z)$, if in D for the mapping $w=f(z)$ not more than p regular inverse-image points correspond to him.

The set of the p -fold points is denoted with F_p .

Theorem: F_p is an L -set for each $p = 0, 1, 2, \dots$. 3 Soviet and 2 foreign references are quoted.

SUBMITTED: 4 September 1956

AVAILABLE: Library of Congress

Card 2/2 1. Picard's theory-Analysis

39-45-2-6/7

AUTHOR: Trokhimchuk, Yu.Yu. (Novosibirsk)

TITLE: The Theorem of H.Bohr and its Generalizations (Teorema G.Bora i
eye obobshcheniya)

PERIODICAL: Matematicheskii sbornik, 1958, Vol 45, Nr 2, pp 233-260 (USSR)

ABSTRACT: The theorem of Bohr on one-sheeted mappings $w = f(z)$ with a,
finite $\lim_{h \rightarrow 0} \left| \frac{f(z+h) - f(z)}{h} \right|$ is generalized by the author so that
the finiteness of the limit and the one-sheetedness of the
mapping can be omitted.
Let z_0 be an arbitrary point of the region of definition D of the
function $w = f(z)$, let $w_0 = f(z_0)$. The point z_0 is called a
U-point of the mapping $w = f(z)$ if there exists a neighborhood
 D_{z_0} of z_0 so that the image of every point $z \in D_{z_0}$, $z \neq z_0$ is
different from w_0 . Let the closed curve l lie in D_{z_0} , let it be
Jordanian and let it run around z_0 . Let $\lambda = f(l)$. If $z \in l$ moves
to l in positive direction and if thereby $w = f(z)$ runs through
the whole curve λ , where $\arg(w - w_0)$ gets a non-negative increase,
and if this holds for all l of $D'_{z_0} \subset D_{z_0}$, then $w = f(z)$ is called

Card 1/3

The Theorem of H. Bohr and its Generalizations

39-45-2-6/7

a direct mapping in the point $z = z_0$.

General theorem of Bohr: Let an arbitrary continuous mapping $w = f(z)$ of the domain D have a constant (finite or infinite)

$\lim_{h \rightarrow 0} \left| \frac{f(z+h) - f(z)}{h} \right|$. If there are U-points, then let $w = f(z)$

be direct in them. Then $f(z)$ is holomorphic in D .

Theorem: Let $w = f(z)$ be a continuous mapping of D with a limit constant in the above sense. Let the limit vanish in at most countably many points.

Then there exists an open, everywhere dense set O in D in every component of which either $f(z)$ or $\overline{f(z)}$ are analytic, where on the complementary set $K = D \setminus O$ there exists a not more than countable set of analytic arcs which is dense everywhere on K , with the property that in the neighborhood of every arc the function $f(z)$ is conformally equivalent to the Bohr function.

The Bohr function reads:

$$w = B(z) = \begin{cases} z & \text{for } Jz \geq 0 \text{ and } |z| < 1 \\ \overline{z} & \text{for } Jz \leq 0 \text{ and } |z| < 1. \end{cases}$$

Card 2/3

The Theorem of H.Bohr and its Generalizations

39-45-2-6/7

Altogether the paper contains 9 lemmas and 6 theorems.
There are 9 references, 6 of which are Soviet, 1 German, 1 American
and 1 French.

SUBMITTED: December 22, 1956

1. Conformal mapping 2. Topology 3. Harmonic functions--Applications

Card 3/3

TROKHIMCHUK, Yu. Yu.

Conformal mapping. Dokl. AN SSSR 121 no. 3:430-431 J1 '58.
(MIRA 11:9)

1. Predstavleno akademikom M.A.Lavrent'yevym.
(Conformal mapping)

AUTHOR: Trokhimchuk, Yu. Yu. SOV/20-121-3-9/47
TITLE: On Conformal Mappings (O konformnykh otobrazheniyakh)
PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 3, pp 430-431 (USSR)
ABSTRACT: Let $f(z)$ be a function continuous in D . The author asserts to have proved under the only assumption of the continuity the following theorems :
1. If $w = f(z)$ is conformal in D with the exception of at most denumerably many points, then $f(z)$ is analytic in D ;
2. If $w = f(z)$ is schlicht and if it possesses a constant stretching ratio with the exception of at most denumerably many points, then either $f(z)$ or $\overline{f(z)}$ is analytic in D .
Furthermore two generalizations of theorem 2. Proofs are not even indicated.
There are 4 references, 3 of which are Soviet, and 1 Japanese.
PRESENTED: March 17, 1958, by M.A. Lavrent'yev, Academician
SUBMITTED: March 10, 1958

Card 1/1

16(1)

AUTHOR: Trokhimchuk, Yu. Yu.

SOV/20-127-2-14/70

TITLE: Monogeneity Conditions

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 2, pp 285-286 (USSR)

ABSTRACT: The paper joins the investigations of D.Ye.Men'shov and Pompeiu. Known results of Men'shov [Ref 4,5] are proved for continuous $w = f(z)$ without assuming the schlichtness. A conjecture of Pompeiu is confirmed: A not completely monogenic function is analytic. For discontinuous functions it is asserted: Theorem: Let $f(z)$ satisfy the Cauchy-Riemann conditions everywhere in D . Then $f(z)$ is analytic everywhere in D , at most with the exception of a discontinuous set $p \subset D$, where the projections of this set onto the x - and y -axes are discontinuous sets too. 2 theorems and a long lemma are given altogether. The author mentions G.P.Tolstov. There are 8 references, 6 of which are Soviet, 1 German, and 1 French.

PRESENTED: April 1, 1959, by A.N.Kolmogorov, Academician

SUBMITTED: June 13, 1958

Card 1/1

TROKHIMCHUK, IV. YU.

p. 2

BASE I BOOK EXPLOITATION

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BR

Issledovaniya po sovremennym problemam teorii funktsiy kompleksnogo peremennogo; sbornik statey (Investigation of Modern Problems in the Theory of Complex Variables; Collection of Articles) Moscow, Fizmatgiz, 1960. 544 p. 3,000 copies printed.

Ed. (Title page): A. I. Markushevich; Eds. (Inside book): V. S. Videnskiy and S. Ya. Khavinson; Tech. Ed.: N. Ya. Murashova.

PURPOSE: This book is intended for specialists in the theory of functions of a complex variable. It may also be used by advanced university students, scientific workers, and specialists in other fields of mathematics.

COVERAGE: The book contains 48 papers originally read at the Third All-Union Conference on the Theory of Functions of a Complex Variable held at Moscow University from May 28 to June 2, 1957. The articles treat problems in the modern theory of functions and its applications. The book is divided into 7 parts. The first part discusses the problem of monogeneity, power series, boundary and extremal properties. The second part discusses entire functions and interpolation and approximation problems. The third part

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Investigation of Modern (Cont.)

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discusses functions of many complex variables. The fourth part discusses conformal mappings and boundary-value problems. The fifth part discusses Riemann surfaces and the theory of distribution of values. The sixth part discusses generalized analytic functions, and the seventh part discusses miscellaneous problems. No personalities are mentioned. References accompany each article.

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Aleksandrov, I. A. (Tomsk). Domain of Values of Certain Functionals in a Class of Functions Univalent and Regular in a Circle 39

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C111/C333

16.3000

AUTHOR: Trokhimchuk, Yu. Yu.

TITLE: Continuous mappings and analytic functions

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1961, 22,
abstract 8B96. ("Issled. po sovrem. probl. teorii
funktsiy kompleksn. peremennogo", M., Fizmatgiz, 1960,
7-29)

TEXT: At first the author gives a short historical survey on the
development of the investigations of the conditions for monogeneity.
Then the author dedicates special attention to the conditions (K'),
(K''), (K''') of D. Ye. Men'shov which require the existence of the
boundary values

$$\lim_{h \rightarrow 0} \arg \frac{f(z+h) - f(z)}{h}, z + h \in t_1, t_2, t_3,$$

$$\lim_{h \rightarrow 0} \left| \frac{f(z+h) - f(z)}{h} \right|, z + h \in t_1, t_2, t_3,$$

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Continuous mappings and analytic . . .

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C111/C333

$$\lim_{h \rightarrow 0} \frac{f(z+h) - f(z)}{h}, \quad z + h \in t_1, t_2,$$

in the point z , where t_1, t_2, t_3 are rays starting from z and situated on different straight lines. It is known (D. Ye. Men'shov) that the fulfillment of an arbitrary of these conditions in every point z of the domain is sufficient that the homeomorphic mapping $w = f(z)$ be conformal. The aim of the author is to extend these theorems to continuous, not necessarily schlicht mappings. The main instrument of investigation is the notion of the monogeneity set M_z of a continuous function $f(z)$ introduced by N. N. Luzin, ; this set is the set of all boundary values of the ratio $(f(z+\Delta z) - f(z))/\Delta z$ for $\Delta z \rightarrow 0$. The sets of monogeneity have been formerly investigated by the author, especially he proved the following theorem: If $f(z)$ is an arbitrary unique and continuous function in the domain D , then the monogeneity sets M_z of this function are either circles (especially points) or full planes for almost all $z \in D$. One of the main results of the paper is the theorem 3: Let an arbitrary continuous mapping $w = f(z)$ of the domain D be given for which the angles are maintained in every point

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Continuous mappings and analytic . . .

except eventually in at most denumerably many points. Then $f(z)$ is analytic everywhere in D . This theorem and other assertions of the paper are proved in final formulation in a later paper of the author (Trokhimchuk, Yu. Yu., Dokl. AN SSSR, 1959, 127, no. 2). In the text there are misprints. The text of the theorems 6 and 8 and of the lemma II are partially printed in italics and partially not. On page 22, line 9 from above there must stand E_i instead of ϵ_i . X

[Abstracter's note: Complete translation.]

Card 3/3

PARASYUK, O.; TROKHIMCHUK, Yu. [Trokhymchuk, IU.], prof., doktor fiz.-
matem.nauk

Mathematics is a powerful instrument of knowledge. Nauka i zhyttia
11 no.2:12-13 F '62. (MIRA 15:3)

1. Chlen-korrespondent AN USSR (for Parasyuk).
(Mathematics)

AM4033672

BOOK EXPLOITATION

S/

Trokhinchuk, Yuriy Yur'yevich

Continuous mappings and regularity conditions (Nepriery*yny*ye otobrazheniya i usloviya monogennosti). Moscow, Fizmatgiz, 63. 0212 p. illus., biblio. 5,000 copies printed.

Series note: Sovremennyye problemy* matematiki

TOPIC TAGS: complex variable, single-sheet mapping, monogeneity sets, internal mapping, arbitrary continuous mapping, analyticity, continuity

PURPOSE AND COVERAGE: The book deals with questions connected with the relations between the properties of continuity, monogeneity, and analyticity of functions of complex variable. A new method is developed by the author and comprises a synthesis of ideas of the theory of internal mapping and theory of sets of monogeneity, makes it possible to get rid of the limiting conditions whereby the continuous mapping in a domain must lie on a single sheet. The book presents a summary exposition not only of the author's own results but also of the entire theory as a whole. The book requires relatively little preparation in the theory of functions of complex variables, but more than average preparation in the theory of functions

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of real variable. Some of the necessary information are given by the author in a special appendix.

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SUB CODE: MA

SUBMITTED: 09Oct63

NR REF SOV: 021

OTHER: 039

DATE ACQ: 27Feb64

Card 2/2

TROKHIMCHUK, Yuriy Yur'yevich; KISUN'KO, V.G., red.; ERUDNO, K.F.,
tekhn. red.

[Continuous mappings and monogeneity conditions] Nepre-
ryvnye otobrazheniia i usloviia monogennosti. Moskva,
Fizmatgiz, 1963. 212 p. (MIRA 17:2)

TROKHIMCHUK, Yu.Yu. (Kiyev)

Continuous mappings of regions in Euclidean space. Ukr. mat. zhur.
16 no.2:196-211 '64. (MIRA 17:3)

MITROPOL'SKIY, Yu.A., akademik, otv. red.; TROKHIMCHUK, Yu.Yu.,
doktor fiz.-mat. nauk, otv. red.; BEREZINETS, L.P.,
red.

[Second summer school of mathematics; Katsiveli, June -
July 1964] Vtoraia letniaia matematicheskaiia shkola;
Katsiveli, iiun' - Iiul' 1964 g. Kiev, Naukova dumka,
1965. 2 v. (MIRA 19:1)

1. Akademiya nauk URSR, Kiev. Instytut matematyky.

L 2631-66 EWT(d)/EWT(1)/T LJP(c) GW
ACC NR: AP5028614

SOURCE CODE:

UR/0041/65/017/001/0089/0094

AUTHOR: Trokhimchuk, Yu. Yu.

ORG: none

TITLE: Continuous maps of planare regions

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 17, no. 1, 1965, 89-94

TOPIC TAGS: map, mapping, plane geometry, topology

Abstract: Elementary methods demonstrate some properties of zero-measure mappings of planar regions. A continuous map $w = f(z)$, $z \in D$ is said to be of zero measure if the entire inverse image of any point $w \in f(D)$ is a closed set of zero measure. Six theorems are proved, of which the most important is:

Theorem 5. If $f: D \rightarrow R_1^2$ is of zero measure then in D there exists a set of G -which everywhere is of the second category (and type G) such that

- 1) $G_1^- = f(G_1^-)$ is also a set everywhere of the second category in $f(D)$ (and type G).
- 2) for every $z \in G$ the ε -degree of $\bigvee_{\varepsilon} (z^-) \neq 0$ for an infinite sequence (which is a function of z) of values of ε tending to zero.

Orig. art. has 3 formulas. /JPBS/

SUB CODE: MA / SUBM DATE: 02Feb63 / ORIG REF: 004 / OTH REF: 001
Card 1/1 DP

TROKHIMCHUK, Yu.Yu. (Kiyev)

Derivatives with respect to direction of functions of several
variables. Ukr. mat. zhur. 17 no.6:67-79 '65.

(MIRA 19:1)

1. Submitted December 11, 1964.

TROKHIMENKO, Ya. K.

112-2-4872

TRANSLATION FROM: Referativnyy zhurnal, Elektrotehnika, 1957,
Nr 2, p. 348 (USSR)

AUTHOR: Trokhimenko, Ya. K.

TITLE: An Instrument for Registering the Frequency-Amplitude
Characteristics of the Audible Sound Range (Pribor dlya
zapisi chastotno-amplitudnykh kharakteristik
zvukovogo diapazona)

PERIODICAL: Sbornik stud. nauch rabot Kiyevsk. politekhn. in-ta,
Kiyev, 1955, pp. 35-38

ABSTRACT: An instrument is described for automatically register-
ing the frequency characteristics of electroacoustic apparatus.
A characteristic is represented as a curve on an oscilloscope
screen with the frequency axis in the logarithmic scale. The
instrument consists of a saw-toothed oscillator generating
pulses with a frequency of 12 cps, controlling the frequency
beat deviations of the oscillator by means of a reactance tube.
The oscillator frequency varies in the 50 to 15 kc range. After
passing through the mixer the low frequency oscillations are fed
through a cathode follower to the input of the quadripole being

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112-2-4872

An Instrument for Registering the Frequency-Amplitude (Cont.)

studied. After detection and amplification the output voltage is fed to the vertically deflecting oscilloscope plates. In order to obtain a deflection along the horizontal axis the voltage is fed from the cathode follower through the logarithmic circuit to the second diode. After amplification it is fed to the horizontally deflecting oscilloscope plates. It is possible to obtain horizontal deflection on the linear scale by means of a two-way switch.

ASSOCIATION: The Kiyev Polytechnic Institute (Kiyevsk. politekhn. in-t)

Card 2/2

AID P - 4540

Subject : USSR/Electronics

Card 1/2 Pub. 90 - 3/9

Author : Trokhimenko, Ya. K.

Title : Method of analysis of composite networks with transistors

Periodical : Radiotekhnika, 3, 16-22, Mr 1956

Abstract : The author analyses a network with triode transistors, applying the nodal analysis and matrix algebra. The treatment used follows that of two-terminal-pair networks and can apply to any linear circuits. The admittance of the network is the square matrix Y. It is termed "the indefinite admittance matrix" because its independent parameters are undefined. As an introduction to matrix representation, the author outlines the treatment of a 4-terminal box. He then proceeds to the description of a general method for impedance matrix transformations with application to admittance matrices for composite networks. Four diagrams, 2 examples, 4 references (1951-1954) (2 Soviet).

AID P - 4540

· Radiotekhnika, 3, 16-22, Mr 1956

Card 2/2 Pub. 90 - 3/9

Institution : None

Submitted : D 10, 1955

TROKHIMENKO, Ya.K.

SUBJECT USSR / PHYSICS
 AUTHOR TROKHIMENKO, JA.K.
 TITLE Back-Coupling in Wiring Schemes with Crystalline Triodes.
 PERIODICAL Radiotekhnika, 11, fasc.9, 46-53 (1956)
 Issued: 19.10.1956

CARD 1 / 2

PA - 1526

The fact that back-coupling in wiring schemes with crystalline triodes is of even greater importance than in valve schemes is due to the following:
 1.) Back-coupling in the crystalline triode is much stronger. 2.) The instability of the equivalent parameters is much higher in these triodes than in the case of electron tubes. In dependence on the ratio of the inner resistance of the signal source R_r and the input resistance R_{in} amplifiers may be divided into the following three classes: 1.) Those, for which it is true that $R_{in} \gg R_r$, i.e. voltage amplifiers. 2.) Current amplifiers for which the inverse inequality $R_{in} \ll R_r$ is true. 3.) Power amplifiers if R_{in} and R_r are commensurable. The third of these cases is mostly true for crystalline triodes. For the general case the amplifier on a crystalline triode must be replaced by a four-pole, and for the analysis it is advisable to apply the methods of the four-pole theory. Schemes with back-coupling are best divided into the following basic types: 1. Parallel back-coupling. 2. back-coupling in series. 3. series-parallel back-coupling, and 4. parallel-series back-coupling. For the analysis of basic back-coupling schemes it is best to use the corresponding system of equivalent parameters for each type of back-coupling. For analysis it is furthermore more con-

Radiotekhnika, 11, fasc. 9, 46-53 (1956)

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PA - 1526

venient to take the reciprocal difference instead of taking the coefficient of back-coupling. The stabilizing effect of back-coupling may be expressed by means of the "sensitivity" S of amplification with respect to the modification of the scheme element which is determined by the ratio between the percentual modification of the amount of the given element and the percentual modification of the amplification coefficient. The evaluation of stabilization on the occasion of a modification of scheme-parameters can be accomplished by means of the stabilization coefficient. The latter is equal to the ratio of sensitivities of the wiring scheme at various conditions. If back-coupling coefficients are equal, the various back-coupling schemes influence the other characteristics of the amplifier and the stability of the parameters (on the occasion of the acting of destabilizing factors) in different ways. Formulae for computation are very voluminous. They can, however, be simplified by taking relations among parameter quantities of the special concrete scheme into account. The application of back-coupling makes it possible considerably to reduce the influence exercised by the instability of the equivalent parameters as well as that of the interior back-coupling of the crystalline triodes. Attached to this paper is a table illustrating the process of computing the wiring scheme with immediate back-coupling.

INSTITUTION:

Name : TRCHIMENKO, YA. K.
Dissertation : Feedback in amplifiers with crystal triodes
Degree : Cand Tech Sci
Defended At : Min Higher Education Ukrainian SSR,
Kiev Order of Lenin Polytechnical Inst,
Chair of Radio Transmission Apparatus
Publication Date, Place : 1956, Kiev
Source : Krizhnaya Letopis' No 5, 1957

SOV/142-58-4-11/30

AUTHOR: Trokhimenko, Ya. K.

TITLE: A Matrix Method for Investigating Voltage Stabilizers with Transistors (Matrichnyy metod analiza stabilizatorov napryazheniya s poluprovodnikovymi triodami)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1958, Nr 4, pp. 459-465 (USSR)

ABSTRACT: The paper discusses methods of analyzing transistor voltage stabilizers, based on the use of an abbreviated matrix of the conductivity of the equivalent stabilizer circuit for weak signals. The stabilizing qualities of the voltage stabilizers are described by the equation $E_{\text{output}} = f(E_{\text{input}}, I_{\text{output}})$. Proceeding from this, a formula is worked out for stabilizer factors and the formula for the dynamic output resistance of the stabilizers. An analysis of the stabilizing function can be made as follows: 1) By compounding from the bias circuit of the voltage

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A Matrix Method for Investigating Voltage Stabilizers with
Transistors

stabilizer an abbreviated matrix of the equivalent conductivities. 2) With the above-mentioned formulae, values of the dynamic stabilization factor K_{st} and of the dynamic output resistance, are worked out for a given working point. These formulae refer to stabilizers which have a common output and input terminal. The author also examines the case when the input and output of the stabilizer do not have a common link, and suggests a method for studying the circuit's stabilizing action. One advantage of this method is that the analysis of the stabilizing function of a circuit layout boils down to a strict sequence of elementary mathematical calculations. There are 6 circuit diagrams and 4 references, 3 of which are Soviet and 1 English.

ASSOCIATION: Kafedra radioperedayushchikh ustroystv Kiyevskogo ordena Lenina politekhnicheskogo instituta
(Chair of Radio Transmitting Equipment, Kiyev Order of Lenin Polytechnical Institute).

SUBMITTED: Februry 24, 1958

Card 2/2

6(4)

AUTHOR:

Trokhimenko, Ya. K., Regular Member
of the Society

SOV/108-13-11-7/15

TITLE:

One-Cascade Circuit RS-Generator With Semiconductor Triode
(Odnokaskadnyy tsepochechnyy RS-generator na poluprovodnikovom triode)

PERIODICAL:

Radiotekhnika, 1958, Vol 13, Nr 11, pp 44-51 (USSR)

ABSTRACT:

The results obtained by investigating the influence exercised by semiconductor triode parameters upon the operation of a one-cascade generator with a phase-shifting circuit of two main types, viz. with parallel resistances and with parallel capacities are described. Investigation extended to generators with the number of circuit members $n = 3$ and $n = 4$. It was assumed to be possible to neglect the complexity of the equivalent parameters of the semiconductor triodes within the operational range of the circuits under investigation. The following method of analysis was employed:

- 1) The shortened matrix of the equivalent conductivities of the generator circuit (Ref 4) was set up.
- 2) The principal determinant of the matrix was put equal to

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One-Cascade Circuit RS-Generator With
Semiconductor Triode

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zero and the characteristic equation of the system was set up. 3) After the characteristic equation the conditions of self-excitation and the frequency of generator self-excitation were determined. By inserting the mean values of equivalent semiconductor triode parameters into the formulae obtained it was possible to investigate the steady operation of the generator. On the strength of the analytical formulae obtained as well as on the basis of the corresponding diagrams conclusions are drawn. There are 11 figures, 3 tables, and 5 references, 4 of which are Soviet.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radioelektroniki i elektrosvyazi im. A.S. Popov (Scientific-technical Society of Radio Engineering and Electro-communications im. A.S. Popov)

SUBMITTED: November 1, 1957

Card 2/2

TROKHIMENKO, Ya.K., dotsent

Dissertation for the degree of doctor in technical sciences at
the Kiev Polytechnical Institute. Izv.vys.ucheb.zav.; radiotekh.
3 no.1:123 Ja-F '60. (MIRA 13:8)

1. Kiyevskiy ordena Lenina politekhnicheskii institut.
(Electronic circuits)

TROKHIMENKO, Ya. K.

Dual conversion of gyrator. Izv. vys. ucheb. zav.; radiotekh.
3 no.6:661-662 N-D '60. (MIRA 14:8)

1. Rekomendovano kafedroy radioperedayushchikh ustroystv
Kiyevskogo ordena Lenina politekhnicheskogo instituta.
(Electric networks)

TROKHIMENKO, Ya.K.

Concerning the terminology in the field of transistor electronics.
Izv. vys. ucheb. zav.; radiotekh. 4 no.1:104-106 Ja-F '61.

1. Kafedra radioperedayushchikh ustroystv Kiyevskogo ordena
Lenina politekhnicheskogo instituta.
(Transistors--Terminology)

TROKHIMENKO, Ya.K.

Triode detector with a composite load. Izv. vys. ucheb. zav.;
radiotekh. 4 no. 2:220-222 Mr-Apr '61. (MIRA 14:5)

1. Rekomendovana kafedroy radioperedayushchikh ustroystv Kiyevskogo
ordena Lenina politekhnicheskogo instituta.
(Radio detectors)

30445

S/109/61/006/012/020/020
D201/D305

9.1923 (1127)

AUTHOR: Trokhimenko, Ya.K.

TITLE: Dependence of resonator chain properties on the position of slots in adjacent diaphragms

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 12, 1961,
2097 - 2099

TEXT: The author considers the case important in practice, where the slots in adjacent diaphragms are displaced with respect to each other. The effect of the longitudinal magnetic field may be taken into account (this has been proved experimentally) by substituting into

$$\frac{p^2 - 1}{p^2 \operatorname{tg}\left(\frac{\pi S}{2p}\right) - \frac{\pi}{2} S p^2} = \alpha, \quad (1)$$

the parameters S' and α' as given by

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